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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,188	12/31/2001	Shengming Liu	075635.0116 (05-01-015)	7184

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EXAMINER

ORTIZ RODRIGUEZ, CARLOS R

ART UNIT

PAPER NUMBER

2125

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

10/039,188

Applicant(s)

LIU, SHENGMING

Examiner

Carlos Ortiz-Rodriguez

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 7-9, 11-18, and 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seki et al. U.S Patent No. 5,095,419 in view of Salm U.S. Patent No. 5,819,338.

Regarding claims 1-5, 9, 11, 14-18, 22 and 24 Seki et al. discloses a computerized method for designing a progressive die used in the manufacturing of a part formed from sheet metal, comprising: receiving, at a computer, information regarding one or more features of the part (C2 L55-60); determining, by the computer, a blank layout for the part based on the features of the part and the number of parts desired; determining, by the computer, one or more details of a strip for the blank layout (C3 L55-62); determining, by the computer, information regarding a die base based on the details of the strip, the die base having a plurality of die plates; receiving, at the computer, one or more parameters associated with one or more configurable items for the die plates; determining, by the computer, information regarding one or more inserts for the die plates based on the operations of the processes needed to form the features in the part; receiving,

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at the computer, one or more parameters associated with the inserts; determining, by the computer, one or more relief cavities for the die plates; generating, by the computer, one or more pockets for the die plates; and generating, by the computer, one or more outputs associated with the progressive die (C2 L55-60 and C3 L55-62).

But Seki et al. fails to clearly specify determining, by the computer, one or more operations associated with each process.

However, Salm disclose determining, by the computer, one or more processes needed to form the features in the part; determining, by the computer, one or more operations associated with each process; receiving, at the computer, one or more parameters associated with each operation; receiving, at the computer, information regarding one or more scrap profiles for the strip; receiving, at the computer, a sequence of the operations of the processes; and simulating, by the computer, the operations of the processes on the strip (C2 L20-32, C2 L45-55 and C5 L50-60).

Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above invention suggested by Seki et al. and combining it with the invention disclosed by Salm. The results of this combination would lead to computer-aided progressive die design system and method.

One of ordinary skill in the art would have been motivated to do this modification in order to prepare an object utilizing a computer on the basis of geometric description as suggested by Salm.

Regarding claims 7, 12, 20 and 25 Seki in combination with Salm disclose all the limitations of the base claims. Seki in combination with Salm further teach the computerized, wherein determining, by the computer, one or more details of the strip for the blank layout comprises receiving, at the computer, a feed direction of the strip, a width of the strip, and a length of the strip based on the number of stations for the progressive die (see Seki C1 L10-22).

Regarding claims 8, 13, 21, 23 and 26 Seki in combination with Salm disclose all the limitations of the base claims. Seki in combination with Salm further teach the computerized method; wherein generating, by the computer, one or more outputs associated with the progressive die comprises generating a printout selected from the group consisting of at least one assembly drawing, a bill of material, and a hole table (see Salm Fig 5).

3. Claims 6, 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seki et al. U.S Patent No. 5,095,419 in view of Salm U.S. Patent No. 5,819,338 and further in view of Maeda et al.

Regarding claims 6, 10 and 19 Seki et al. in combination with Salm disclose all the limitations of the base claim.

But, Seki et al. in combination with Salm fail to clearly specify the computerized method, further comprising: determining, by the computer, a press force associated with each operation; and determining, by the computer, a press force center for the progressive die based on the press force associated with each operation.

However, Seki et al. in combination with Salm and further in combination with Maeder et al. disclose the computerized method, further comprising: determining, by the computer, a press force associated with each operation; and determining, by the computer, a press force center for the progressive die based on the press force associated with each operation (see Maeder et al. C3 L35-67 and C4 L 35-40).

Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above invention suggested by Seki et al. and Salm and combining it with the invention disclosed by Maeder et al.

One of ordinary skill in the art would have been motivated to do this modification because it is known in the art to determining/controlling press force with a computer as suggested by Maeder et al.

#### *Citation of Pertinent Prior Art*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to computer-aided progressive die design system and method:

- a. U.S. Pat. No. 3,784,439 to Dorman, which discloses machine for forming and applying index tabs to file cards.
- b. U.S. Pat. No. 3,860,803 to Levine, which discloses automatic method and apparatus for fabricating progressive dies.

c. U.S. Pat. No. 4,517,649 to Kitagawa, which discloses automatic die-interchanging control system of a press machine.

The following publications are cited to further show the state of the art with respect to computer-aided progressive die design system and method:

d. U.S. Pub. No. 2002/0078768 to Hiatt et al., which discloses apparatus and method for extracting a sample from a strip of material.

### *Conclusion*

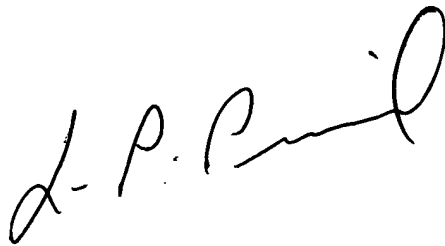
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Ortiz-Rodriguez whose telephone number is (571) 272-3747. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The central official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P Picard can be reached on (703)308-0538. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'C. Ortiz-Rodriguez', written in a cursive style.

Carlos Ortiz-Rodriguez  
Patent Examiner  
Art Unit 2125

cror

June 27, 2005

**LEO PICARD**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**